

US009510556B2

# (12) United States Patent

Torgerson et al.

# (54) DOSAGE VALVE FOR A BACKFLUSHING AND TEAT DIP APPLICATOR SYSTEM

(71) Applicant: GEA Farm Technologies, Inc.,

Naperville, IL (US)

(72) Inventors: Kevin L Torgerson, Holmen, WI (US);

Nathan Hedlund, Lewiston, MN (US); Matthew J Stuessel, Alma Center, WI

(US)

(73) Assignee: GEA Farm Technologies, Inc.,

Naperville, IL (US)

(\*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

(21) Appl. No.: 14/588,094

(22) Filed: Dec. 31, 2014

(65) Prior Publication Data

US 2015/0107687 A1 Apr. 23, 2015

#### Related U.S. Application Data

- (60) Division of application No. 13/269,835, filed on Oct.10, 2011, which is a continuation of application No.(Continued)
- (51) **Int. Cl.**A01J 7/04 (2006.01)

  A01J 7/02 (2006.01)

  (Continued)
- (52) U.S. Cl.

# (10) Patent No.: US 9,510,556 B2

(45) **Date of Patent:** 

Dec. 6, 2016

#### (58) Field of Classification Search

CPC ....... A01J 7/025; A01J 7/04 USPC ....... 119/14.47, 670, 651, 652, 14.18, 14.03 See application file for complete search history.

#### (56) References Cited

#### U.S. PATENT DOCUMENTS

1,365,665 A 1/1921 Davies 2,012,031 A 8/1935 Woodruff (Continued)

#### FOREIGN PATENT DOCUMENTS

AU 641229 9/1993 DE 1582939 7/1970 (Continued)

# OTHER PUBLICATIONS

3-A Accepted Practices for Permanently Installed Product and Solution Pipelines and Cleaning Systems Used in Milk . . . , No. 605-04, (Section N), 3pp. document downloaded Feb. 15, 2007.

(Continued)

Primary Examiner — Yvonne Abbott-Lewis (74) Attorney, Agent, or Firm — Smith Law Office; Jeffry W. Smith

### (57) ABSTRACT

A system for cleaning a dairy animal milker unit and applying dip to a dairy animal, the system includes a main control, an air supply, a water supply, a backflush fluid supply, a dip supply, a stall control for receiving the air, water, backflush fluid and dip supplies, and a safety valve that is adjacent to a downstream portion of the milker unit to control backflush and dip fluids being fed to the milker unit

## 6 Claims, 45 Drawing Sheets

